REMARKS

Allowed dependent Claims 5, 6, 8, 10, 15, 16, 23, 24, and 27 are rewritten in independent form. Independent Claims 1, and 19 are revised to define over the art of record. Claims 1-28 remain, with Claims 5-8, 10, 15-18, and 23-28 previously indicated as allowed or as allowable if rewritten in independent form.

An embodiment of the present invention comprises a mobile aerial communications antenna including a communications system and a lift system for generating a lift force to suspend and maneuver the communications system in free space (specification, page 4, lines 6-8; page 7, lines 4-7). Disclosed embodiments of the lift system include helicopter-like propellers (Fig. 5) and a lighter-then-air craft such as a blimp or balloon (Fig. 6). The present mobile aerial communications antenna may be deployed and positioned rapidly, including deployment in locations where it is difficult to position a conventional mobile cellular antenna (page 6, lines 1-4).

Apparatus Claim 1 is amended to state that the lift source is operable for generating a lift force sufficient to suspend the mobile aerial assembly in free space. A similar recitation is in amended method Claim 19. For the reasons discussed below, these amendments to independent Claims 1 and 19 define novel and unobvious subject matter over the applied art.

Claims 1-4, 11-14, and 19-22 were rejected as being unpatentable over *Nilsson* (US 6,611,236). (Although that rejection specifies only *Nilsson*, the body of the rejection relies on *Miyake* (US 6,678,341) to supply certain elements missing from *Nilsson*. The undersigned assumes that the Examiner meant to apply *Miyake* as a secondary reference to *Nilsson*, in rejecting the claims identified in paragraph 2 of the Office action.)

The rejection characterizes *Nilsson* as disclosing a transportation system that comprises a lift source operable for generating a list force, with columns 2 and 3 cited for support. However, a careful reading of *Nilsson* fails to show the lift-force teaching attributed to that reference. *Nilsson* actually discloses a pointing and tracking system to optimize the bearing between land-based antennas and satellites so as to obtain correct alignment (column 1, lines 20-24). Fig. 1 of *Nilsson* shows an antenna arrangement for that purpose, including a large parabolic dish mounted in a gimbal arrangement providing three degrees of movement. The entire antenna arrangement 10 is anchored to a base 16 (column 2, lines 64-66) which is in turn anchored to a ship or other vehicle (column 1, lines 13-15). *Nilsson* thus discloses a tracking arrangement for a relatively large and heavy antenna intended for continuously tracking a moveable signal source located above the horizon (column 1, lines 46-48), presumably such as satellite-phone communication satellites and other satellites that are not in geosynchronous orbits and that thus move with respect to points on the earth's surface.

In particular, nothing in *Nilsson* is seen to disclose generating a lift force. That reference discloses tracking motion of the parabolic dish along axes of azimuth z, elevation y, and elevation x (column 3, line 65), which correspond to the degrees of freedom in the gimbaled arrangements supporting the parabolic dish. However, that support arrangement is mechanically anchored to the base 16 which is, in turn, mounted on a ship or land vehicle. Given the lack of any disclosure in *Nilsson* for a lift source operable for generating a lift force, combined with the overall size and weight that one of ordinary skill would attribute to such an antenna arrangement, it is clear that *Nilsson* does not disclose or suggest any lift source operable for generating a lift force, much less a lift

source capable of generating lift sufficient to suspend the mobile aerial assembly in free space, as now recited in independent Claims 1 and 19.

Miyake fails to overcome the foregoing teachings missing from *Nilsson* and, in fact, is not discussed for that purpose in the rejection. *Miyake* discloses a multimode radio communication system usable for two-way radio communication either using some infrastructure equipment (e.g., base stations) or direct peer-to-peer communication without using any infrastructure (column 2, lines 15-27). The Applicants respectfully submit that one of ordinary skill would not find, in *Miyake* or *Nilsson*, anything likely to suggest combining the teachings of those two references for any purpose relevant to the present invention. *Nilsson* discloses an antenna mounting arrangement for land-based tracking of moveable signals from above the horizon, e.g., satellites, while *Miyake* deals with a very different kind of communication, namely, cellular or direct communication with land-based radio devices not elevated above the horizon. It is not seen how one of ordinary skill would find it obvious to apply the mobile communication signal and control system of *Miyake* to the gimbaled antenna tracking system of *Nilsson* "to perform peer-to-peer communication" as the rejection asserts, inasmuch as satellite-tracking dish antennas are not used for that purpose.

Based on the foregoing arguments, and on the amendments to Claims 1 and 19, the Applicants respectfully submit that those claims define patentable subject matter over *Nilsson* and *Miyake*. Likewise, the Applicants submit that each claim depending respectively from Claims 1 or 19 likewise is patentable over that art.

Claim 9 was rejected as unpatentable over *Nilsson* in view of *Miyake* as applied to Claim 1, further in view of *Wright* (US 2003/0148736). *Wright* is cited as disclosing a

lift source comprising a flight control device [0047-0052]. However, that "lift source" is merely an aircraft in which *Wright's* aircraft data communication system is installed. That system obtains flight information from a ground source, and also receives aircraft flight data from the aircraft's airborne data acquisition equipment [0051]. *Wright's* apparatus records the respective data, including any flight data exceeding the so-called parameter data, but does not control flight of the aircraft and thus does not comprise a flight control device.

More significantly, *Wright* does not disclose or suggest providing a lift source operable for generating a lift force sufficient to suspend the mobile antenna assembly of *Nilsson* in free space. Accordingly, the combination of elements recited in dependent Claim 9 would not have been obvious to one of ordinary skill from *Nilsson* in view of *Miyake* and *Wright*.

The foregoing is submitted as a complete response to the Office action identified above. The Applicants submit that the present application is in condition for allowance and solicit a notice to that effect.

Respectfully submitted,

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